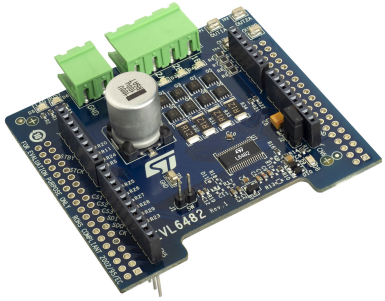
EVL6482

Data brief

Stepper motor driver evaluation board based on the L6482 device



Product status link
EVL6482

Features

- Voltage range from 7.5 V to 85 V
- Low R_{dsON} MOSFETs in DPAK package
- Power OK and fault LEDs
- Advanced current control
- Fully protected power stage
- Microstepping resolution up to 1/16
- Compatible with Arduino® UNO R3 connector
- Suitable for multi-motor solutions
- RoHS compliant

Description

The EVL6482 is a stepper motor driver evaluation board based on the L6482.

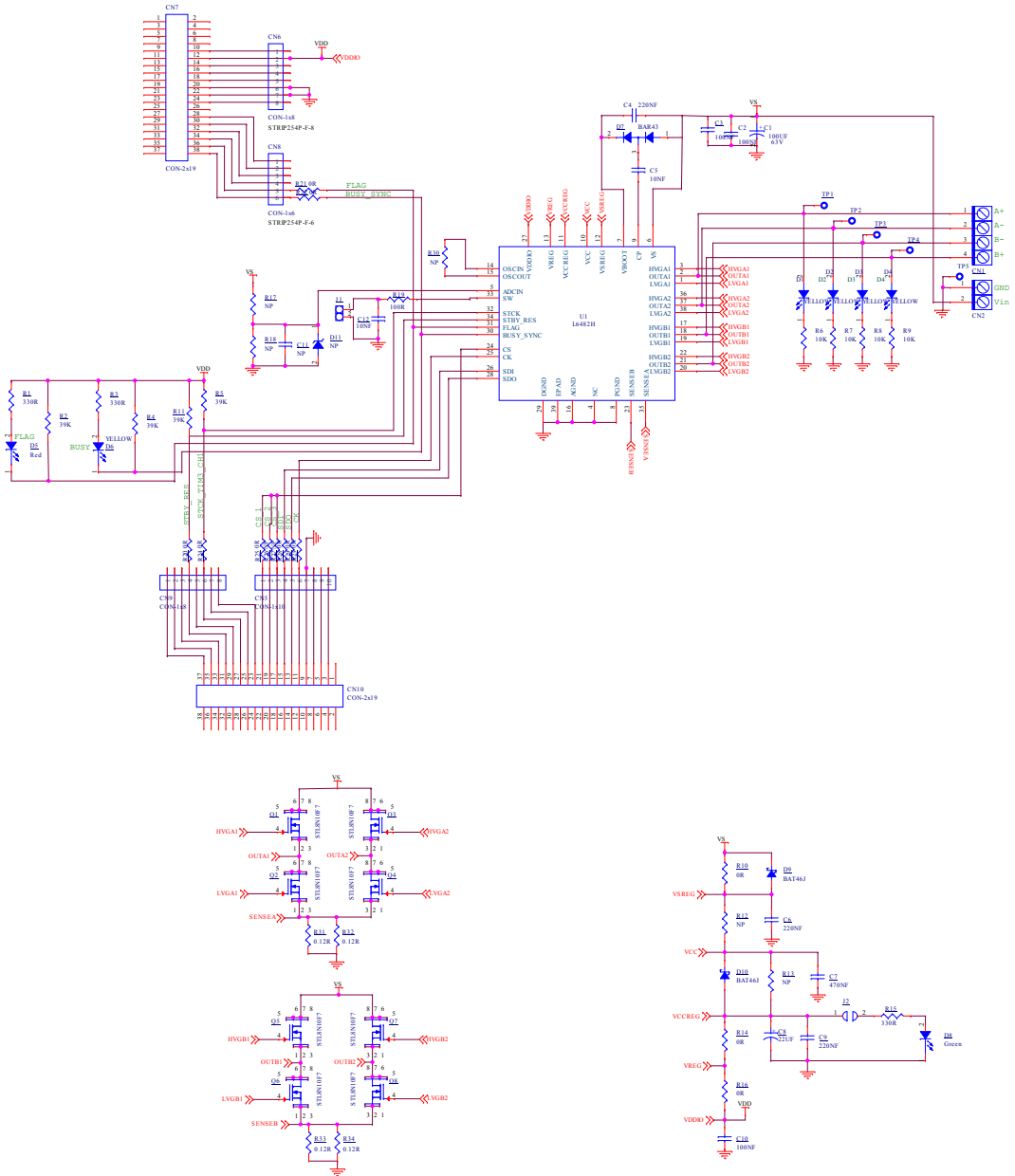
It provides an affordable and easy-to-use solution to drive a stepper motor in your application.

The L6482 device, created using analog mixed signal technology, is an advanced, fully integrated solution suitable for driving two-phase bipolar stepper motors with microstepping. It integrates a dual full bridge gate driver for N-channel MOSFET power stages with embedded non dissipative overcurrent protection. Thanks to a new current control, a 1/16-microstepping is achieved through an adaptive decay mode, which outperforms traditional implementations. The digital control core can generate user-defined motion profiles with acceleration, deceleration, speed, or target position, which are easily programmed through a dedicated set of registers. All application commands and data registers, including those used to set analog values (that is: current protection trip point, dead time, PWM frequency, etc.) are sent through a standard 5-Mbit/s SPI. A complete set of protections (thermal, low bus voltage, overcurrent, and motor stall) makes the L6482 device “bullet proof”, as required by the most demanding motor control applications.

The EVL6482 is compatible with the Arduino® UNO R3 connector and it supports the addition of other boards, which can be stacked to drive up to three stepper motors.

1 EVL6482 schematic diagram

Figure 1. **EVL6482 board schematic**



Revision history

Table 1. **Document revision history**

Date	Version	Changes
18-Mar-2024	1	Initial release.